

PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q64544

Dominique HAMOIR

Appln. No.: 09/856,362

Group Art Unit: 2633

Confirmation No.: 6876

Examiner: Leslie PASCAL

Filed: May 22, 2001

For: AMPLIFICATION FOR VERY BROAD BAND OPTICAL FIBER TRANSMISSION
SYSTEMS

SUPPLEMENTAL REPLY BRIEF UNDER 37 C.F.R. § 41.43(b)

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.43(b), Appellant respectfully submits this Reply Brief in response to the Supplemental Examiner's Answer mailed April 25, 2008.¹

¹ It is noted that this is the third Examiner's Answer in this case, the first two being mailed on February 8, 2007 and April 20, 2007.

I. REAL PARTY IN INTEREST

The real party in interest is Alcatel Lucent. This is the same real party in interest as before, but the name of the assignee has changed since the time this appeal was filed.

II. STATUS OF CLAIMS

Claims 1-8 and 10-25 are pending in the application.

Claims 24 and 25 are rejected under the first paragraph of 35 USC 112 as not supported by an enabling disclosure.

Claims 1-6, 11-18, 21 and 22 are rejected under 35 USC 103(a) as unpatentable over Saleh (USP 6,587,241).

Claims 7, 8, 10, 19, 20 and 23 are rejected under 35 USC 103(a) as unpatentable over Saleh in view of Chraplyvy (EP 0749224)

III. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are:

1. Whether claim 24 is supported by an enabling disclosure.
2. Whether claim 25 is supported by an enabling disclosure.
3. Whether claims 1-6, 11-18, 21 and 22 are unpatentable over Saleh.
4. Whether claims 7, 8, 10, 19, 20 and 23 are unpatentable over Saleh in view of Chraplyvy.

IV. ARGUMENT

1. Improper Citation of New Art in Examiner's Answer

At pages 2-3 of the Examiner's Answers mailed February 12, 2007 and April 23, 2007, the examiner has included a section (8) entitled Evidence Relied Upon, and has cited an additional reference not earlier of record. In the Supplemental Examiner's Answer mailed April 25, 2008, this section (8) is found at page 4, the examiner explaining what it is relied on to teach (i.e., that others in the art were allegedly aware of the problem to which the present invention is addressed) and also explaining that it was not cited earlier because it did not issue until after the final Office action was written.²

As noted in the Reply Brief filed April 9, 2007, this additional reference (USP 6,895,283 to Islam et al) is being relied on by the examiner to support his rejection of claims. If it is not being relied on in the rejection, it should not be considered by the Board in this appeal. If it is being relied on, it is a new ground of rejection, should be stated as such, and applicant given an opportunity to respond.

In the Supplemental Examiner's Answer mailed April 25, 2008, beginning at the bottom of page 4, the examiner argues that reliance on Islam et al does not constitute a new ground of rejection, that the original rejections stand and are not changed in any way, and that the citation of Islam et al is not due to appellant pointing out a flaw in the original rejection. What appellant did was point out that the prior art did not teach recognition of the problem, so there would have been no motivation for the artisan to come up with the solution. The examiner disagrees and cites Islam et al for the proposition that the ordinarily skilled artisan would have been aware of

² The fact that a reference was not available earlier is completely irrelevant to whether or not it constitutes a new ground of rejection, but in any event it may also be noted that the almost identical US PCT publication WO99/66607 was published December 23, 1999, more than six years prior to the examiner's final Office action in this case.

the problem. The undersigned does not understand how the examiner can maintain that Islam et al was not cited to address a flaw in the rejection.

Without reliance on Islam et al, the rejection does not stand.³ Even with reliance on Islam et al, the rejection fails, because Islam et al does not in fact teach what the examiner cites it for. Islam et al discusses Raman gain tilt, and explains that in a system that covers the S-band, C-band and L-band, the longer wavelength L-band channels will deplete energy from the C-band, while the shorter wavelength S-band channels will add energy to the C-band. So in an already existing C-band system, if L-band channels and S-band channels are added symmetrically, the net effect on the C-band will be zero energy change. See lines 45-52 of column 19.

Thus, Islam et al is focused on seeing that the middle part of the broad band has zero energy change, by offsetting each depleting longer wavelength channel with a corresponding enriching lower wavelength channel. That is not what the present invention is about. The present invention is about compensating the gain in the shorter wavelength region to address the depletion in that shorter wavelength region that occurs due to the Raman effect, and compensating the gain in the longer wavelength region to address the enrichment which happens in that longer wavelength region due to the Raman effect.

And again, if this concept of the present invention is taught by Islam et al, or would have been obvious in view of something that Islam et al teaches, then Islam et al is a necessary component of the rejection and cannot be raised by the examiner for the first time in an Examiner's Answer without applicant having a full opportunity to respond and, if appropriate, amend.

³ Appellant does not concede that the rejection is reasonable even with reliance on Islam et al. The point is that whether the reference does nor does not strengthen the rejection is something that appellant should be permitted to consider in the context of a non-final Office action, or in a new ground of rejection stated under 37 CFR 41.39(a)(2), with opportunity to amend, if desired.

2. In re Hyatt is Inapplicable to the Present Case

In the Reply Brief filed April 9, 2007, appellant explained why the holding in *In re Hyatt* is clearly not applicable to a claim that does not use means plus function claim language.

Beginning in the middle of page 5 of the Supplemental Examiner's Answer mailed April 25, 2008, the examiner alleges that appellant has never responded to multiple arguments by the examiner as to why (according to the examiner) a "single means" objection to the claims should apply to a claim that does not recite a "means" anywhere in the claim. The undersigned does not see that a response is really needed, but in any event appellant has responded to every such argument by the examiner. The examiner argues that *In re Hyatt* holds that a single means problem is a problem under the first paragraph of 35 USC 112, not the sixth paragraph. To the contrary, *In re Hyatt* holds that in a claim which uses "means plus function" language but recites only a single means, there is a problem under the first paragraph of 35 USC 112. That is not the case here where no "means plus function" language is used.

The examiner argues that MPEP 2164.08(a) makes it clear that the single means issue is not only applicable to means plus function claims, yet MPEP 2164.08(a) explicitly defines a single means claim as a claim "where a means recitation does not appear in combination with another recited element of means." It is difficult to imagine how it could be more clear that MPEP 2164.08(a) is concerned only with means plus function claims.

According to MPEP 2164.08(a) and *In re Hyatt*, the reason that a single means claim is subject to a rejection under the first paragraph of 35 USC 112 is that the single means covers every conceivable structure for achieving the stated result. This may have been the law in 1983 when *In re Hyatt* was decided, but it is clearly not the law today that a "means" element covers every structure for achieving the recited function. Such language only covers the disclosed structure plus equivalents. So the rationale on which *In re Hyatt* was based does not even apply today. But even if it did, it is inarguably clear from both MPEP 2164.08(a) and *In re Hyatt* that it applies to claims using means plus function language. Present claim 24 does not use means

plus function language and does not purport to cover every structure for achieving a claimed function. Claim 24 states that the fiber provides linear losses to compensate enrichment.

Claim 25 depends on claim 19 which depends on claim 11. It is not a single means claim, since it recites optical media as well as compensation means. The compensation means may be separate from the optical media or it may be something that has been added to the optical media, but it is in either case properly a separate element of the claim, and the claim is therefore not a “single means” claim.

What is also clear is that the examiner has not pointed to anything in claims 24 or 25 that the artisan could not do, but bases his rejection entirely on the premise that any single means claim is subject to a rejection under the first paragraph of 35 USC 112 and so claims 24 and 25 must be rejectable under the first paragraph of 35 USC 112. But since neither of these claims is properly considered a single means claim, the only stated basis for the rejection fails, and the examiner has not presented a *prima facie* basis for the rejection. It should therefore be reversed.

3. Saleh Does Not Teach the Claimed Invention

Beginning at the bottom of page 6, the examiner argues that Saleh teaches the same structure as in the present invention so that the claims must read on Saleh. If that is the case, one questions why the rejection of claim 1 is for obviousness under 35 USC 103 rather than for anticipation under 35 USC 102. The fact of the matter is that Saleh does *not* teach the same structure. As explained in earlier filings, Saleh teaches a fiber. Saleh does not teach a fiber where the channels are operated closely enough together to function as a single very broad band as that term is defined in the present specification. More importantly, Saleh does not teach “means for compensating energy transfers between channels caused by the Raman effect over the very broad band” as explicitly required in claim 1. The present application teaches that, as shown in Fig. 2, the gains in the upper and lower regions should be set to compensate for the enrichment and depletion which occurs in those regions. The structure in the present application which performs this compensation function is either discrete amplifiers attenuators or distributed

amplification or attenuation, set to levels which will provide the claimed compensation. Saleh does not teach this. The examiner seemingly acknowledges this by stating the rejection as one of obviousness, but then now argues that Saleh teaches all of the claimed structure. This is simply on its face untrue.

And the examiner seems in this Supplemental Examiner's Answer to be arguing that applicant has not taught how to control the amplification levels provided by either the discrete or distributed amplifiers. Discrete and distributed amplifiers are so well known and widely understood that it is difficult to understand how this argument can be made. The art cited by the examiner himself is replete with teachings of discrete and distributed amplification. There cannot possibly be any credible argument that one of skill in the art would not know how to control the gain levels of discrete or distributed amplifiers.

Appellant has not claimed to have invented discrete or distributed amplification. What appellant has done is discover that setting the gain levels appropriately can compensate for Raman effects in a very broad band system. How (i.e., the appropriate level variation) the gains should be controlled is shown in Fig. 2. This is neither shown nor suggested in Saleh.

Conclusion

For the reasons set forth in detail above and in the earlier filed briefs, it is respectfully submitted that the rejections of the examiner should be reversed.

Respectfully submitted,

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